PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Noteborn et al.

Serial No.: To be assigned

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For: MODIFICATIONS OF APOPTIN

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PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

Please amend the above identified patent application as follows:

IN THE CLAIMS:

Please amend claims as follows. Please note that claim amendments are presented here in clean form for clarity, a marked up version of the claim amendments is attached.

Please cancel claims 13 and 19 without prejudice or disclaimer.

3. (Amended) The isolated or recombinant phosphorylated Apoptin of claim 2 or functional equivalent and/or functional fragment thereof wherein said isolated or recombinant phosphorylated Apoptin is phosphorylated on a threonine residue of Apoptin, which threonine residue, in the Apoptin of FIG. 1(SEQ ID NO:1), is located between amino acid 100 and amino acid 121 of SEQ ID NO:1.

4. (Amended) The isolated or recombinant phosphorylated Apoptin of claim 3 or functional equivalent and/or functional fragment thereof, wherein said isolated or recombinant phosphorylated Apoptin is phosphorylated on a threonine residue, which threonine residue, in the Apoptin of FIG. 1(SEQ ID NO:1), resides at amino acid position 106 and/or 107 and/or 108 of SEQ ID NO:1.

7. (Amended) A host cell comprising the vector of claim 5.

8. (Amended) An isolated or synthetic antibody or functional equivalent and/or functional fragment thereof specifically recognizing the phosphorylated Apoptin of claim 1.

12. (Amended) A host cell comprising the nucleic acid of claim 11.

16. (Amended) A method for testing an *in vitro* treatment effect of Apoptin on tumor cells, said method comprising:

providing a cell lysate of tumor cells with Apoptin or functional equivalent and/or functional fragment thereof which can be phosphorylated; and

determining phosphorylation state of said Apoptin.

17. (Amended) The method according to claim 14 wherein said Apoptin further comprises a fusion protein.

20. (Amended) A pharmaceutical composition comprising:

the phosphorylated Apoptin of claim 2.

23. (Amended) The pharmaceutical composition of claim 22 for the treatment of a disease wherein enhanced cell proliferation or decreased cell death is observed.

25. (Amended) A method for treating a subject having a disease wherein enhanced cell proliferation or decreased cell death is observed, said method comprising:

treating said subject with the pharmaceutical composition of claim 20.

Remarks

The Office is respectfully requested to enter the above amendments prior to the calculation of the filing fee in this application. Should the Office determine that additional issues remain which might be resolved by a telephone conference, it is respectfully invited to contact applicants' undersigned attorney.

Respectfully Submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please amend the claims as follows:

3. (Amended) The isolated or recombinant phosphorylated Apoptin of [claim 1 or] claim 2 or functional equivalent and/or functional fragment thereof wherein said isolated or recombinant phosphorylated Apoptin is phosphorylated on a threonine residue of Apoptin, which threonine residue, in the Apoptin of FIG. 1(SEQ ID NO:1), is located between amino acid 100 and amino acid 121 of SEQ ID NO:1.

4. (Amended) The isolated or recombinant phosphorylated Apoptin of [claim 1, claim 2, or] claim 3 or functional equivalent and/or functional fragment thereof, wherein said isolated or recombinant phosphorylated Apoptin is phosphorylated on a threonine residue, which threonine residue, in the Apoptin of FIG. 1(SEQ ID NO:1), resides at amino acid position 106 and/or 107 and/or 108 of SEQ ID NO:1.

7. (Amended) A host cell comprising the vector of claim 5 [or the gene delivery vehicle of claim 6].

8. (Amended) An isolated or synthetic antibody or functional equivalent and/or functional fragment thereof specifically recognizing the phosphorylated Apoptin of claim 1[, claim 2, claim 3, or claim 4].

12. (Amended) A host cell comprising the nucleic acid of [claim 10 or the vector of] claim 11.

16. (Amended) A method for testing an *in vitro* treatment effect of Apoptin on tumor cells, said method comprising:

providing a cell lysate of tumor cells with Apoptin or functional equivalent and/or functional fragment thereof which can be phosphorylated [according to any one of claims 1 to 4]; and

determining phosphorylation state of said Apoptin.

17. (Amended) The method according to claim 14 [or claim 16] wherein said Apoptin further comprises a fusion protein.

20. (Amended) A pharmaceutical composition comprising:

the phosphorylated Apoptin of [claim 1,] claim 2[, claim 3 or claim 4, the vector of claim 5, the gene-delivery vehicle of claim 6, or the host cell of claim 7].

23. (Amended) The pharmaceutical composition of [claim 20, claim 21, or] claim 22 for the treatment of a disease wherein enhanced cell proliferation or decreased cell death is observed.

25. (Amended) A method for treating a subject having a disease wherein enhanced cell proliferation or decreased cell death is observed, said method comprising:

treating said subject with the pharmaceutical composition of claim 20[, claim 21, claim 22, claim 23, or claim 24].